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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,446	02/28/2002	Jong Sung Choi	0630-1430P	4983

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BIRCH STEWART KOLASCH & BIRCH  
PO BOX 747  
FALLS CHURCH, VA 22040-0747

EXAMINER

ROCHE, TRENTON J

ART UNIT	PAPER NUMBER
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2193

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/084,446		CHOI ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Trent J. Roche		2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-11,13-21 and 28-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-11,13-21 and 28-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

*TL*

### DETAILED ACTION

1. This office action is responsive to communications filed 17 March 2005.
2. Per Applicant's request, amended claims 1, 2, 6, 7, 9-11, 14-16, 20, 21, 28 and 30 have been entered. Claims 4, 12 and 22-27 have been canceled. Newly added claims 32-39 have been entered. Claims 1-3, 5-11, 13-21 and 28-39 are now pending.
3. Claims 1-3, 5-11, 13-21 and 28-39 have been examined.

### *Response to Arguments*

4. Applicant's arguments filed 17 March 2005 have been fully considered but they are not persuasive.

#### **Per claims 1, 11, 28 and 30:**

The Applicant states that Metz teaches away from modifying Meta in view of Shimomura, and further, that "Metz requires the user system to switch to a designated channel 0, which is for broadcasting operating system upgrade files, without advertisement broadcasting signal, in order to upgrade the software." (page 16 of the remarks) In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., providing a more user-friendly way to upgrade software by not requiring a channel switch) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Indeed, nothing in the claim language of independent claims 1, 11, 28 and 30 precludes the steps of switching channels to receive the advertisement broadcasting signal and associated software code. Further, Metz does not state that

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channel 0 *only* (emphasis added) carries software code, but rather "will carry the operating system data...and carry the video and audio packetized elementary streams for the program guide service." (col. 9 lines 15-17) As advertisements consist of video and audio, and channel 0 carries video and audio, Metz does not teach away from a combination with Shimomura, and as such, the combination of Metz and Shimomura is proper. The rejection of claims 1, 11, 28 and 30 is proper and maintained.

**Per claims 2, 3, 5-10, 13-21, 29 and 31:**

The Applicant states that claims 2, 3, 5-10, 13-21, 29 and 31 are allowable as being dependent on an allowable base claim. As was shown above, the rejection regarding independent claims 1, 11, 28 and 30 is proper, and as such, the argument that claims 2, 3, 5-10, 13-21, 29 and 31 are allowable as being dependent on an allowable base claim is considered moot.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 33, 35, 37 and 39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. The term "predetermined" in claim 33, 35, 37 and 39 is a relative term which renders the claim indefinite. The term "predetermined" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would

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not be reasonably apprised of the scope of the invention. It is unclear to the Examiner how to reasonably interpret the extent of predetermination. The present invention discloses the ability to allow a software update to be included in an advertisement broadcasting signal which is placed "between the news broadcasting time and drama broadcasting time" according to page 10, line 7 of the specification. Claims 33, 35, 37 and 39 disclose that the upgrading unit downloads the software code without switching to a predetermined channel. However, to even watch the initial channel with the news broadcast and drama broadcast, the user would have switched to a predetermined (to the user) channel that the user wished to view, and as such, would read opposite the claim language. Indeed, at some point in the instant invention, the receiver must be turned on for a software upgrade to occur. At this "powering on" point, the receiver would be required to switch to a predetermined channel, either a default startup channel or the last viewed channel by the user. Were this not the case, no channel would ever be selected, and the unit could never receive a software upgrade. As such, the scope of the claims are difficult to ascertain and therefore indefinite.

### *Claim Rejections - 35 USC § 103*

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-3, 5-11, 13-21 and 28-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,666,293 to Metz et al., hereafter referred to as Metz, in view of U.S. Patent 6,473,858 to Shimomura et al., hereafter referred to as Shimomura.

**Per claim 1:**

Metz discloses:

- an apparatus for upgrading a software (“a particular set-top terminal to upgrade its operating system” in col. 5 lines 40-41)
- a version comparing unit for comparing a version of a software code included in a broadcasting signal and a version of a previously installed software code to determine a newer version (“The set-top terminal stores a version number for the operating system that it currently is running, and the broadcast data stream will include data identifying the version number of the operating system being broadcast...” in col. 5 lines 42-46)
- an upgrade processing unit for installing software associated with the software code if the version of the software code is newer than the version of the previously installed software code (“The set-top terminal actually captures an operating system from the broadcast if the broadcast version number is different (eg. higher or lower) than the number of the version that terminal is currently running” in col. 5 lines 47-50)

substantially as claimed. Metz does not explicitly disclose the broadcasting signal being an advertisement broadcasting signal. Shimomura discloses in an analogous digital broadcasting system that the ability to broadcast advertisement broadcasting signals was well known in the art (“advertisements...may be broadcast by the data broadcast facility...” in col. 4 lines 43-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to distribute advertisement signals in digital broadcasts, as this would enable an entity to broadcast advertisement information to a plurality of customers or users, thereby generating interest and profit in the advertised item.

**Per claim 2:**

The rejection of claim 1 is incorporated, and further, Metz discloses data of an upgraded system software as claimed (“operating system upgrade...” in col. 5 lines 51-52)

**Per claim 3:**

The rejection of claim 1 is incorporated, and further, Metz discloses an apparatus for receiving digital broadcasting as claimed (Note Figure 1 and the corresponding sections of the disclosure)

**Per claim 5:**

The rejection of claim 1 is incorporated, and further, Metz discloses the software being an upgraded software as claimed (“operating system upgrade...” in col. 5 lines 51-52)

**Per claim 6:**

The rejection of claim 1 is incorporated, and further, Metz discloses a code detecting unit for detecting whether the software code is inserted in the advertisement broadcasting signal as claimed (Note Figure 1, item 102 and the corresponding sections of the disclosure.)

**Per claim 7:**

The rejection of claim 1 is incorporated, and further, Metz discloses a mode setting unit for setting a download-possible mode by determining whether the code of the system software can be downloaded when the broadcasting signal in which the software code is inserted is received as claimed (“Using the relevant PID value from the network table packet, the MPEG demux

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recognizes and captures the packets containing the operating system data file for the particular type of set-top..." in col. 37 lines 2-5)

**Per claim 8:**

The rejection of claim 1 is incorporated, and further, Metz discloses a storage unit for storing the software code as claimed ("stores that new version in RAM" in col. 10 lines 3-4)

**Per claim 9:**

The rejection of claim 1 is incorporated, and further, Metz discloses an error detecting unit for determining whether an error exists in the software code as claimed ("checks and confirms that the extracted and stored version is error free" in col. 10 lines 5-6)

**Per claim 10:**

The rejection of claim 1 is incorporated, and further, note the rejection regarding claim 1. The advertisements of Shimomura would be associated with a certain company.

**Per claim 11:**

Metz discloses:

- a method of upgrading a software ("a particular set-top terminal to upgrade its operating system" in col. 5 lines 40-41)
- receiving a broadcasting signal in which a user data containing a software code is inserted ("The set-top terminal stores a version number for the operating system that it currently is

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running, and the broadcast data stream will include data identifying the version number of the operating system being broadcast...” in col. 5 lines 42-46)

- installing software associated with the software code (“the DET extracts the broadcast operating system from the transport stream...the microprocessor transfers the version of the operating system from RAM to non-volatile memory, effectively writing the new version over the old version...” in col. 10 lines 1-9)

substantially as claimed. Metz does not explicitly disclose the broadcasting signal being an advertisement broadcasting signal. Shimomura discloses in an analogous digital broadcasting system that the ability to broadcast advertisement broadcasting signals was well known in the art (“advertisements...may be broadcast by the data broadcast facility...” in col. 4 lines 43-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to distribute advertisement signals in digital broadcasts, as this would enable an entity to broadcast advertisement information to a plurality of customers or users, thereby generating interest and profit in the advertised item.

**Per claim 13:**

The rejection of claim 11 is incorporated, and further, Metz discloses an apparatus for receiving digital broadcasting as claimed (Note Figure 1 and the corresponding sections of the disclosure.)

**Per claim 14:**

The rejection of claim 11 is incorporated, and further, Metz discloses checking whether the software code corresponds to a model of a receiving apparatus (“Each type of set-top terminal will identify the correct operating system from among the plurality broadcast and capture only that operating

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system” in col. 5 lines 35-37) and checking whether an error exists when the broadcasting signal is received as claimed (“checks and confirms that the extracted and stored version is error free” in col. 10 lines 5-6)

**Per claim 15:**

The rejection of claim 11 is incorporated, and further, Metz discloses comparing a version of the software code and a version of the code of a previously installed code (“if the version number for the operating system broadcast on the network differs from the version number of the operating system currently running...” in col. 9 lines 65-67)

**Per claim 16:**

The rejection of claim 11 is incorporated, and further, Metz discloses deleting the received software code if the version of the software code is not newer than the version of the previously installed software code (“the DET terminates the upgrade process” in col. 9 lines 63-64) and checking whether the software will be upgraded in case the version of the software code is newer than the version of the previously installed software code as claimed (“if the version number for the operating system broadcast on the network differs from the version number of the operating system currently running...then the DET proceeds with the upgrade...” in col. 9 lines 65 to col. 10 line 1)

**Per claim 17:**

The rejection of claim 11 is incorporated, and further, Metz discloses the software being deleted or installed according to a response of a user as claimed (“the user may execute a specified sequence...” in col. 9 lines 24-25)

**Per claim 18:**

The rejection of claim 11 is incorporated, and further, Metz discloses the user data including a header block and a payload block as claimed (Note Figure 5B and the corresponding sections of the disclosure.)

**Per claim 19:**

The rejection of claim 18 is incorporated, and further, Metz discloses the header block and payload block being in packet form as claimed (Note Figure 5B and the corresponding sections of the disclosure.)

**Per claim 20:**

The rejection of claim 18 is incorporated, and further, Metz discloses the header block comprising an applied receiver description code block, a version number block, a current packet number block, a last packet number block, a status flag block, a payload length block, and a software version information block as claimed (Note Figures 3 and 4 and the corresponding sections of the disclosure.)

**Per claim 21:**

The rejection of claim 18 is incorporated, and further, Metz discloses a software code unit and an error check block as claimed (“If the demultiplexer has captured five cells, the demultiplexer pulls out the payload data and uses the CRC data to check for errors” in col. 16 lines 7-9). Metz does not explicitly disclose correcting the error. Shimomura discloses in an analogous digital broadcasting

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system the ability to received packet units and correct errors (“The MPEG-2 frame reassemble places the frames into a defined order such that a forward error correcting code may be used to check for errors and correct detected errors” in col. 13 line 65 to col. 14 line 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the error correcting ability of Shimomura with the digital broadcasting system of Metz, as the system disclosed by Metz would then be able to possibly fix errors detected by its CRC check without required a costly re-transmission of data.

**Per claim 28:**

Metz discloses:

- an apparatus for upgrading a software (“a particular set-top terminal to upgrade its operating system” in col. 5 lines 40-41)
- a code detecting unit for receiving a digital broadcasting signal and detecting whether the software code is inserted in the digital broadcasting signal (Note Figure 1, item 102 and the corresponding sections of the disclosure.)
- a mode setting unit for setting a download-possible mode by determining whether the software code is downloadable (“Using the relevant PID value from the network table packet, the MPEG demux recognizes and captures the packets containing the operating system data file for the particular type of set-top...” in col. 37 lines 2-5.)
- a storage unit for downloading and storing the software code in case of the download-possible mode (“stores that new version in RAM” in col. 10 lines 3-4)

- an error detecting unit for determining whether an error exists in the downloaded software code (“checks and confirms that the extracted and stored version is error free” in col. 10 lines 5-6)
- a version comparing unit for comparing a version of the downloaded software code and a version of a previously installed software code (“The set-top terminal stores a version number for the operating system that it currently is running, and the broadcast data stream will include data identifying the version number of the operating system being broadcast...” in col. 5 lines 42-46)
- an upgrade processing unit for installing the software associated with the software code if the version of the downloaded software code is newer than the version of the previously installed software code and if no error exists in the downloaded software code (“The set-top terminal actually captures an operating system from the broadcast if the broadcast version number is different (eg. higher or lower) than the number of the version that terminal is currently running” in col. 5 lines 47-50. Further, “checks and confirms that the extracted and stored version is error free” in col. 10 lines 5-6)

substantially as claimed. Metz does not explicitly disclose the broadcasting signal being an advertisement broadcasting signal. Shimomura discloses in an analogous digital broadcasting system that the ability to broadcast advertisement broadcasting signals was well known in the art (“advertisements...may be broadcast by the data broadcast facility...” in col. 4 lines 43-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to distribute advertisement signals in digital broadcasts, as this would enable an entity to broadcast advertisement information to a plurality of customers or users, thereby generating interest and profit in the advertised item.

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**Per claim 29:**

The rejection of claim 28 is incorporated, and further, note the rejection regarding claim 2.

**Per claim 30:**

Metz discloses:

- a method for upgrading a software (“a particular set-top terminal to upgrade its operating system” in col. 5 lines 40-41)
- checking whether a software code inserted in a broadcasting signal corresponds to a model of a receiving apparatus or an error exists in the software code when the broadcasting signal is received (“Each type of set-top terminal will identify the correct operating system from among the plurality broadcast and capture only that operating system” in col. 5 lines 35-37. Further, “checks and confirms that the extracted and stored version is error free” in col. 10 lines 5-6)
- comparing a version of the software code and a version of a previously installed software code (“The set-top terminal stores a version number for the operating system that it currently is running, and the broadcast data stream will include data identifying the version number of the operating system being broadcast...” in col. 5 lines 42-46)
- deleting the code if the version of the software code is not newer than the version of the previously installed software code and checking whether the software will be upgraded if the version of the software code is newer than the version of the previously installed software code (“the DET terminates the upgrade process” in col. 9 lines 63-64. Further, “if the version number for the operating system broadcast on the network differs from the version

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number of the operating system currently running...then the DET proceeds with the upgrade...” in col. 9 lines 65 to col. 10 line 1)

- installing software associated with the software code according to a response from a user (“the user may execute a specified sequence...” in col. 9 lines 24-25)

substantially as claimed.

**Per claim 31:**

The rejection of claim 30 is incorporated, and further, note the rejection of claim 2.

**Per claim 32:**

The rejection of claim 1 is incorporated, and further, Metz discloses automatically downloading the software code during broadcasting of the broadcasting signal regardless of the version of the software code as claimed (“Each DET produced by a different manufacturer would identify and capture a different operating system file containing in the repeating carousel transmission...” in col. 35 lines 61-64. The unit receives the code before even checking version number information.)

**Per claim 33:**

The rejection of claim 1 is incorporated, and further, Metz discloses automatically downloading the software code without switching to a predetermined channel as claimed (“when the user turns the box 100 ‘ON’, the microprocessor initiates a channel selection of the last view channel...” in col. 24 line 5-8. Had the user last viewed channel 0 prior to turning off the box, Metz would not require switching to a predetermined channel upon turning the box on to receive the software code. As

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noted in col. 9 lines 16-17, channel 0 “will carry...the video and audio packetized elementary streams for the program guide service...”)

**Per claim 34:**

The rejection of claim 11 is incorporated, and further, note the rejection regarding claim 32.

**Per claim 35:**

The rejection of claim 11 is incorporated, and further, note the rejection regarding claim 33.

**Per claim 36:**

The rejection of claim 28 is incorporated, and further, note the rejection regarding claim 32.

**Per claim 37:**

The rejection of claim 28 is incorporated, and further, note the rejection regarding claim 33.

**Per claim 38:**

The rejection of claim 30 is incorporated, and further, note the rejection regarding claim 32.

**Per claim 39:**

The rejection of claim 30 is incorporated, and further, note the rejection regarding claim 33.

*Conclusion*

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trent J. Roche whose telephone number is (571) 272-3733. The examiner can normally be reached on Monday - Friday, 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (571) 272-3719. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

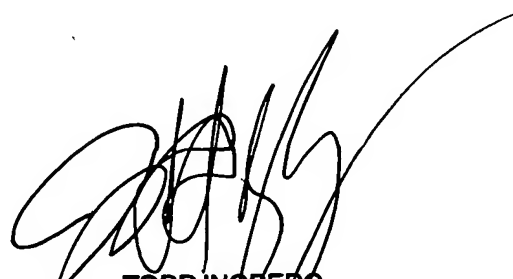
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Trent J Roche  
Examiner  
Art Unit 2193



TJR



**TODD INGBERG**  
**PRIMARY EXAMINER**